

NASA Academy Alumni Association (NAAA) Electronic Newsletter

Vol. 1 #2 April 1998

David Kalman, editor

Please send all questions or comments to David Kalman,
djkalman@pcisys.net

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1. President's Message

[Editor's note: Mike and Brian decided to give their comments to David in order to be incorporated into just one officer's report.]

Many of you are in Houston at JSC right now, having a great time with all the alums down there. Don't forget - some of us are still up in the cold North! Wiggle your toes in the grass for us.

We've completed the first steps in working with MSFC to reinstate the Academy there. Not unexpectedly, the responses from the office there have been form letters. Keep in mind, this does not mean that the letters did not have any effect. The volume of work that the targeted personnel have is large; they cannot write personal letters of reply to everyone, and we shouldn't be disappointed. We made a statement. The next step is to follow up. The NAAA Executive Committee is drafting a more detailed letter, following up on the round of letters from alums. However, words of support are only a piece of the solution. The real incentive for change will come from within NASA but outside of MSFC. New Academies are a large piece of the solution. As more Academies sprout at KSC, JSC, JPL, and other centers, the pressure will rise on MSFC to reinstate their program. Additionally, speaking with high level officials at NASA HQ who have an influence on the various centers, including AA for Education Frank Owens and Dan Goldin himself, will help the cause. Catherine will continue to bring the MSFC group together as we work the various avenues. This is a long-term goal, which may involve related goals such as helping new Academies excel and talking to HQ and members of Congress. Stick with it and I'm confident we'll create the change we're looking for.

Something that we can do independent of anyone else is to plan a phenomenal nationwide event this year! We control the destiny of that one, we

just have to make it happen. I've gotten emails from interested people, but just a handful. We can plan something fabulous if we come together and make it happen. Some great ideas are out there, and I'm sure more will emerge. But if we are to have something really special, we have to get cracking! Spring is upon us, and big events take a while to put together. If you're interested in spending a long weekend at Space Camp, or seeing a Shuttle Launch in the midst of a beachside vacation with NASA Academy alums from all over the country, or coordinating a nationwide model rocket launch for tens of thousands of teens and kids around the country to commemorate NASA's 40th Anniversary, send me an email at my address below and we'll coordinate the group. The possibilities are endless- the question is which great idea do we pick, and which do we save for next year?

In other areas, Mike Moreau continues to coordinate the superb Web site, and with Brian Roberts', Chris Leweck's, Ian Ruiz's, and other alums' help it is growing to include all kinds of resources and useful information. Check it out if you haven't been there lately, www.nasa-academy.org. Brian will be continuing work with the financial group, and if you haven't donated yet please do. It enables us to do all the small and large things that keep NAAA active for both fun and for your professional future!

And finally, to all those in Houston, have a great time together! We expect many stories upon your return....

2. Special Report - MSFC letter campaign

MSFC Letter campaign

by: Catherine Venturini MSFC '95

Chair, MSFC Alumni Working Group

Thanks to all alumni for your help and support in the MSFC letter campaign. We had approximately 30 alumni send letters to MSFC administrators expressing their opinion on why MSFC should continue the NASA Academy program. This is 27% of the total number of alumni who have participated in the NASA Academy programs. Most of you who sent letters have received some sort of reply letter but at this time we are still not sure what sort of impact the letters had on the administration. I am hoping in the next few weeks to find out more to share with you all.

If anything, this campaign has shown that our alumni association has really brought all the center programs together as a united community. This is evident by all those who sent letters. I would like to especially thank the following: NAAA MSFC Alumni Working Group, NAAA Executive Committee, Alys Blair MSFC97, Brian Roberts GSFC94, Chethan Kumar GSFC97, Chris Hart MSFC96, Cyrus D Jilla MSFC95, Dan Greenspan, Doug Nelson MSFC96, George Hunyadi MSFC96, Grant Bromhal GSFC95, Heather Jean Cohea MSFC97, Heather Thomas SSAI, Holly Offerman GSFC95, Jane Thorpe

GSFC95, Jill Macklem MSFC95, Jon Sims GSFC95, Julia Plummer GSFC97, Kevin Welsh MSFC96, Kyle Snyder DRFC97&98, Laura Burns MSFC96, Lila Engle GSFC97, Matthew Lowry GSFC93, Matthew Meineke MSFC97, Mike Moreau GSFC94, Nathan R. Stoddard MSFC97, Nichole Mattson MSFC96, Robert L. Bayt GSFC93, Ruth Moser MSFC95, Shad Plante MSFC96, Warren Brown GSFC93, Zine Brooks Smith MSFC97, and to all the others who sent letters.

This letter campaign is only the start to saving the MSFC NASA Academy program. Another way to help is by getting in touch with past advisors and your Space Grant letting them know the situation and possibly having them write letters. We have also discussed other ideas like having the 1998 NAAA reunion in Huntsville, AL and / or having a group of alumni come down to MSFC to talk directly with key administration about the program and what NAAA can do to help the situation.

Watch in the coming months for more details!

3. Special Report - Denver Reunion

The Continuing Adventures of the Colorado Academy Alumni...

by Trey McDowell and Mike Moreau

Wow! How many Academy alumni are in Colorado these days? We had a great "mini-reunion" in Littleton, Colorado on March 4 attended by 7 alumni, all veterans of the Goddard Academy. The occasion was a tour of some of the planetary spacecraft activities at the Flight Systems Division of Lockheed Martin Astronautics. Mike Moreau, who organized the tour, spent a summer working at Astronautics on the '98 Mars Surveyor Program (MSP).

Before we get into all the really cool stuff, the Academy alumni in our reunion included: Trey McDowell (GSFC '93), Mike Moreau and David Kalman (GSFC '94), Laura Sachi (GSFC '95), and Jeff Baltrush, Jennifer Probst, and Elisa Quintana (all GSFC '97). Both Laura and Trey work at Astronautics, and they helped escort the group around the facilities.

Our tour encompassed only a small part of the activities at Astronautics. Astronautics is currently responsible for Lockheed Martin's expendable launch vehicle programs, including the Titans, Atlas, Athena, and the Centaur upper stage. On the spacecraft side, Astronautics has built the Viking landers (many people who worked on that program still remember Dr. Soffen), the Magellan spacecraft that orbited Venus in the early 1990's, Mars Global Surveyor, and Cassini's propulsion module. Astronautics also designed and built the MSP '98 orbiter and lander which are both undergoing systems level testing in preparation for launch in December, '98 and January, '99, respectively. Astronautics is responsible for a number of DoD and National Reconnaissance Office (NRO) programs, some of which we couldn't tell you

about even if we knew what they were! A recent issue of Aviation Week and Space Technology featured an article on NRO satellites including some grainy pictures of a Lacrosse imaging radar spacecraft at Astronautics. And there are still countless other programs that haven't been mentioned. Needless to say, Astronautics is a very dynamic company.

Well, we've plugged Astronautics enough. The tour was great. It started with presentations on the orbiter and lander for MSP 2001, Stardust, and Genesis. The MSP '01 orbiter and lander are in the middle of the detail design phase, about 3 months from preliminary design review. Stardust, a Discovery mission to collect material from the tail of comet WILD-2, is nearing the end of the integration and test phase. Genesis, a Discovery mission that will collect "dust" at the L1 point (one of the Earth-Sun libration points), is at the very beginning of the design phase.

After the presentations, we toured some of the facilities at Astronautics. We visited the Space Simulation Lab (SSL), home of the thermal vacuum chambers and the environmental test facilities. They had always been under the impression that this building was always off-limits. That was obviously not true though security gets very tight when DoD or NRO payloads are being tested.

We also had a birds-eye view into the spacecraft final assembly clean room. We were able to gaze on the MSP '98 lander and Stardust which are both almost fully assembled and in the middle of systems level testing. These two spacecraft were dwarfed by a satellite hidden under a plastic sheet on the other side of the room. Was that the Lacrosse satellite mentioned in Aviation Week? We missed the MSP '98 orbiter which had just left for environmental testing. Even though we were touring the facilities after "quitting time," there were still a few Lockheed Martin employees working on both payloads.

The tour also included the Mission Support Area or MSA. This is the facility responsible for controlling Mars Global Surveyor. All of the subsequent Mars spacecraft will also be controlled from this center, which according to the mission operations people should make things very interesting with 3-4 or more spacecraft to watch at once.

After the tour, in what is becoming a tradition for the growing group of Colorado alumni, we adjourned for pizza, where we spent the time renewing friendships and catching up on the latest news. Even though most of us didn't attend the academy during the same year, we usually have a pretty good time recounting some of the adventures from our respective summers. If you're coming to Denver or anywhere close to Colorado, let us know! We don't need much of an excuse to all get together. Next time maybe we'll be able to get Jeremy Richardson and Brett Allard to show up too!

4. Editorial

by David Kalman, NAAA newsletter editor

Ok, time again for my monthly soapbox. Although I had a lot of people thank me for putting together the newsletter, I received no response as to what people want to see ***IN*** the newsletter. Furthermore, I am only seeing the same small group of people writing articles each month. If this newsletter is to benefit NAAA, two things must occur: it must be “by the people” and it must be “for the people”.

Therefore, I am asking all of you to pitch in, to write articles, to suggest what you want to see in the newsletter. I am asking for each academy coordinator to send in a quick report on what your academy will be doing this summer. I am asking that someone who attended the Houston reunion to do a write-up on it. I am asking some of you to write some of the filler articles that I have listed at the bottom of the newsletter, so that when there is a short newsletter, I can fill it in. I am asking those of you who are working on flight hardware (ok, this is my engineering bent, nothing is sexier than flight hardware ☺) to give a quick project report, so that people know what Academy alumni are working on, both as students (Citizen Explorer, SNOE, others ??) and as professionals (Stardust, MGS, etc.).

When someone asks me what the NAAA members do, I would like to be able to show them a newsletter, and say that this is representative of what not only have we done, but we are continuing to do. There is no reason that belonging to NAAA should be considered of a lower status than belonging to AIAA or IEEE. And there is no reason why the newsletter should not be a means of keeping all of our members updating on what is going on in the space industry, and not just that people’s small niche in the space industry.

5. Where are they now?

For future issues, I would suggest the following format for the submissions:

Name:

email:

Home contact info:

Work company:

Work title:

Work contact info:

Major work project(s):

Discussion (2-3 paragraphs, can be either or both personal and work related)

So here they are, GSFC Academy 2 (1994), in their own words:

Todd Crowley

Hey Everyone!

Well, I am still here in New Hampshire, amazingly enough :) Life has been very good lately. I am still working as a software engineer at Cabletron Systems (networking company). I now have some projects that are completely 'my own' so I am very happy here. I enjoy coming to work every day, I feel like I am finally accomplishing something.

As far as school goes, I have almost completed my masters program for EE at UNH. I only have a one-semester project left to finish, hopefully next year. This year has been extremely busy though, as we are supposed to be releasing soon.

Life outside of work and school is great! I have been dating this wonderful woman from South Africa (yes, the same one Gene, Brian, and Andrew met!). Things are going great! Mary-Ann and I went to South Africa together for 2 weeks in January. I met her parents and saw all of the sights down there. Wow, is it beautiful in Cape Town!! Mary-Ann and I have also been to Rome, Italy recently.

I recently bought a mountain bike, and am looking forward to biking a lot this summer (both with my feet and on my motorcycle!). Seems like every weekend has something going on, as we have recently been on a ski trip, have seen some local plays (saw 'Miss Saigon' and 'Wait Until Dark' recently), and we are in the planning stages for a motorcycle trip this summer. Also have been reading a lot lately ('A Civil Action' and 'The Hot Zone' were great books!). Can't wait for the summer for jetskiin', biking, hiking, tennis, and lots, lots more fun stuff.

Life is good here, definitely cannot complain. I am looking forward to what the future has in store for me :) I hope everyone from the Academies are enjoying life as much as I am!

Take Care All,

Todd Crowley
Eppin' New Hampshire
NAII

Craig Farnham

email : cfarnham@hotmail.com

Home address: Sankoma House 1887 Maginu

Miyamae-ku Kawasaki-shi

Japan 216-0035

Work : NOVA Corp.

Title : English Teacher

I'm in Japan teaching English for a year and learning Japanese. Though at the ripe age of 24, I'm beginning to think becoming well-rounded can only be taken

to a certain point. On my return to America in August, I will settle down a bit and get a real job. Look forward to more from Greenbelt Pictures, makers of "Reservoir Penguins".

Andrew A. Gray

Professional:

I am in the final stages of a R&D project at NASA/GSFC to develop a very high data rate digital receiver for satellite communications. I start a new job with the Communications Systems and Research Section at JPL in June. I will be involved with research in optical communications as well as helping to develop the next generation of the work I have been involved with at GSFC the last two years. I intend to do a PhD in EE part-time, probably at USC, while working at JPL. I no longer have the mental and digestive fortitude to think about the terms "PhD" and "completion date" in conjunction.

Personal:

Since the commute to my new job would be too great from D.C., I intend to move to Pasadena in late May. My near term personal goals:

- 1) Get a weekend job with Taco Bell at Venice Beach.
- 2) Remember what my second near term goal is.

Long term personal goals:

- 1) Get a date before I am 35.
 - 2) Go to the NAAA reunion held at Gene Fujii's sports bar/golf range on the moon.
-

Jose Guzman

Jose J. Guzman is currently working on his Ph.D. in Aero/Astronautical Engineering at Purdue University. His research deals with utilizing invariant manifolds for spacecraft trajectory analysis and design. Specifically, missions to libration points are being considered. A conference paper on this topic will be presented at the AAS/GSFC International Symposium on Spaceflight Mechanics, 11-15 May 1998. He continues to practice Tae-Kwon-Do in his, continuously decreasing, free time. He also enjoys reading about Salvador Dali and tries to practice his paranoia-critical method at random instances.

Jose Javier Guzman
guzman@ecn.purdue.edu
<http://roger.ecn.purdue.edu/~guzman>

Heather Hanson

hanson@ls2.com
home:
711 Cactus Bend Drive
Pflugerville, TX 78660
(512) 252-8582

work:
Logical Silicon Solutions
design engineer
www.ls2.com

I'm currently designing integrated circuits for Logical Silicon Solutions. Mostly EPROMs, with the occasional microprocessor and peripheral project. I'm looking forward to starting grad school next fall in computer engineering.

During non-work hours, I've been swimming, writing web pages, organizing a backyard croquet tournament, and tending to three very hardy office fish.

David Kalman

Name: David Kalman
email : djkalman@pcisys.net
Home address: 2680 Sierra Dr.
Colorado Springs, CO 80917
(719) 591-1808
Work: Aegis Research Corp.
1551 Vapor Trail
Colorado Springs, CO 80916
(719) 570-7041
Title: Engineer

Professional: I have just started my third year working for Aegis. I demanded and got a market-competitive salary, so I plan to be staying with this company for a while. I finished my 2nd (MS - Space Ops) and 3rd degrees (BS - EE) in Dec. 95, and have only taken one class since. I do NOT intend to pursue a PhD :)

Personal: I bought a house in Dec 96 ... became broke very quickly :) Still no girlfriend (competing with Andrew for the last married award - hide your kid, Christine :) Still playing eight hours of volleyball a week, and participating in numerous organizations and other activities. I am looking forward to my 10-year high school reunion this summer, so I can remind my classmates of what losers they were then and what loser they still are!!

Adam London

Adam London is (still) at MIT, now working on his PhD. Supported by a GSRP from Goddard, he finished his masters in 1996, working on a project that was essentially derived from the microthruster work he did at the Academy. His thesis presented the results of a study of which propulsion technologies made the most sense to scale down for use on Microspacecraft. Since September of 1996, he has been working on his PhD project, which is to develop and test one of the technologies that was found to be most promising in his systems study: a micro-Chemical Rocket Engine. This will be a bipropellant rocket

engine made of silicon, and fabricated using technology similar to that used for manufacturing silicon-based computer chips. The finished rocket motor will be about 20x12x3 mm in size, and produce slightly more than 3 pounds of thrust using 300 sec Isp

propellants. It should have a thrust to weight ratio of more than 1000, which compares quite favorably to conventionally fabricated 3-lb thrusters with T/W of order 1-5, or even the space shuttle main engines, which have a T/W of about 60. He expects the first firing of such an engine in late summer or early fall, and plans to wrap up his PhD sometime in 1999, hoping to confine his time at MIT to years beginning with 9's (91-99). On other fronts there is significantly less to report, though he is still enjoying Boston and sailing whenever time or weather permits, and reminds everyone that they are welcome to drop by and visit at any time.

Adam London

aplondon@mit.edu

MIT Gas Turbine Laboratory

77 Massachusetts Ave. Rm 31-233

Tel: 617/258-8514

Cambridge, MA 02139

Fax: 617/258-6093

Michelle Minitti

Michelle Minitti

181 Irving Ave. #3

Providence, RI 02906

401-273-9561

Michelle_Minitti@brown.edu

I am rapidly approaching the end of my third year of grad school in geology at Brown University, where I am kept busy (when not messing around otherwise) studying Mars. Right now I am trying to wrap up a project in which I am investigating the effects of impact shock on water in a certain group of minerals, called amphiboles (you hear me, Jacob?) We are trying to figure out how the water in the only samples we scientists have of Mars, the SNC meteorites, might have been affected when they were so rudely blasted off of Mars x years ago. I am also in line to take my qualifying exams at the end of this semester...the proposal I am going to defend will also have to do with Mars. This semester I am also TAing for the first time and enjoying all but the grading very much!

Going to meetings has been keeping me motivated as of late. I just got back from the Lunar and Planetary Science Conference in Houston, where I met up with alumni Jacob Yates, Holly Ridings and Jeff Nettles (dance, baby!). It was great fun and we all thought Gerry would be excited to know of our mini-reunion. I am also heading out to a conference in CA on low-cost planetary missions in April to present a mission that some students at Brown and the University of Arizona jointly planned at a JPL workshop last summer. Very cool!

On a more personal note, my longtime beau, Pete Sutcliffe, and I got engaged last August! He's finishing up med school at UPenn and will likely go

into emergency medicine (thank God, someone who'll be able to deal with blood!). No date is set yet, but it will likely not be until after I graduate (2000). Hey, it takes a long time to plan a wedding! ;) Best wishes to all of you!

Mike Moreau

I am still at the University of Colorado at Boulder. I finished my Masters last May, and am now working on a Ph.D. in aerospace engineering. I am in the first year of a GSRP fellowship from GSFC, working under the Guidance and Control Branch. Goddard is one of the NASA centers supporting a large variety of Global Positioning System (GPS) research. My work to date has focused on applications of GPS for spacecraft orbit and attitude determination in highly eccentric or geostationary orbits. When not doing my research (...heh,heh), I have really enjoyed working with David and Brian on the NAAA Executive Council, and with all of the other alumni that have helped out with projects large and small over the past year or so. Living in Colorado is GREAT, I just wish there was more time to get outside and enjoy it! If you are visiting the Boulder/Denver area, let me know!

Brian Roberts

I spent the year following SAll working in the Office of University Programs at Goddard and was a staff member along with Jim Brice and Mike Moreau for the summer 1995 Goddard Academy. In the fall of 1995, I started graduate school at the University of Maryland and will finish my Master of Science in Aerospace Engineering this summer. I'm developing a wrench for use in space that doesn't "click" like a traditional ratchet wrench, and my work has been supported by Goddard through the GSRP and the DDF and now by JSC.

This fall I will continue work towards a PhD in Mechanical Engineering and start research on fire behavior and prevention in space, obtaining a Masters in Fire Protection Engineering along the way.

Since I no longer have to work on my '75 Nova in my free time, I spend free moments as a volunteer firefighter and member of the county underwater rescue and recovery team and also give weekly tours of Goddard for the Visitor Center. For the past year or so I've been tending to financial issues for the NAAA. I try to relieve stress and relax by running or playing softball, flag football, soccer, and ultimate frisbee whenever I can.

I've tried to continue the Academy "living experience" and over the past three years have lived with someone from each year of the Goddard Academy -- Andrew Gray (GSFC '94), Jane Thorpe (GSFC '95), Mike Baine (GSFC '93), David Vaughan (GSFC '95), Jacob Yates (GSFC '96), and Ian Ruiz (GSFC '97). I'm now working on the Marshall Academy as George Hunyadi (MSFC '96) has recently joined us. Fellow SAllers will be happy to know that I am somewhat financially stable now and no longer have to borrow clothes from them. :-)

Ben Shapiro

I am having a good time in California, at Caltech. It looks like I might finish my PhD in Control and Dynamical Systems in about a year and my stuff is starting to get used in industry (Pratt & Whitney). The weather is great, I get to do lots of skiing and volleyball. I am also learning to swing and taking some art classes at the Art Center College of Design (which is actually a very good art college here in Pasadena). I expect to start looking for a real job sometime this year in research (I am leaning towards a faculty job at this point but only by a little bit).

Robin Smith

Robin graduated last June from MIT with her Master's degree in aerospace engineering. After attending the NAAA banquet last summer, she spent almost three weeks driving cross-country from Massachusetts to Southern California. She is now working as a systems engineer in the Defense Systems Division of TRW in Redondo Beach, CA.

Matthew Templeton

I'm (still) at New Mexico State University in Las Cruces, which I came to after graduating from the University of Delaware in 1994. I got my Master's Degree in Astronomy and Physics in November of 1997, and I am now working on my dissertation research. I am performing linear and non-linear hydrodynamic studies of pulsating stars, which I am working on in collaboration with several people at Los Alamos National Laboratory. Great fun. To pay the bills during the school year, I teach freshman-level Astronomy labs, although the New Mexico Space Grant has also been kind enough to award me a fellowship for the past three years. In my copious (ha!) spare time I've been trying to learn the classical guitar, reading all the books I bought Cliffs Notes for in high school, renting all the movies I missed out on seeing over the past three years, and weeping over the Philadelphia Flyers uninspiring (to date) season....

Christine Wehlburg

Christine Wehlburg (NA II) defended her Ph.D. thesis last May and officially graduated in August 1997. Joe (Nuclear Engineer) and Christine (Physical Chemist) are currently working as post-docs at Sandia National Labs in Albuquerque, New Mexico. The youngest (unborn) member at NA II turned three in December and is the smartest, most beautiful child known to the free world. She is already dribbling a basketball-so look out WBA! Should all go well, there will be a new member of the Wehlburg team making an appearance in the first week of November. But as we in NA II recall, due dates mean nothing to babies and he/she may not make an appearance until Thanksgiving. At the reunion last year in DC, more than a few people asked Christine how she managed both a family and career. Well, the best, not perfect, answer she can come up with is....Love your kids and mind your job, not the other way around, and you can have it all.

6. Next Issue

Issue deadline: 27 April 5 PM MST (MDT??)

Planned articles:

Officer's message ??

Special report - Brief blurb on special happenings planned for each academy this summer (since none were written last month)

Special report - Houston reunion / flight experiments

Special report - flight hardware?

Where are they now - MSFC Academy 1 (1994)

7. Ideas for future issues

For later issues, I would like to have on tap as filler and for later focus articles on the following:

1. How to choose a grad school / using NAAA to help get you into a grad school / using NAAA when visiting grad schools
2. How to play up your academy experience to help you get a job
3. How to get graduate research fellowships
4. How to properly thank your space grant / inform them of what you did this summer (a great start of fall article)
5. How to help your space grant recruit quality people for future academies
6. How to get kids / college students interested in space (Chris, can we steal stuff from the SEDS site? :)
7. Stories of how the academies help you get to where you are now (jobs, grad schools, etc.)
8. Misc. humorous reminiscing of academies past.
9. "Where are they now?" sections for all academies, plus one for admin staff (Dr. Soffen, Jim Brice, etc.)